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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
BURCH, MELODY M

ART UNIT	PAPER NUMBER
3683	

DATE MAILED: 05/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/034,574	AKHTAR ET AL.	
	Examiner	Art Unit	
	Melody M. Burch	3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 March 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21 and 31-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21 and 31-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *11* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 4/29/02 fails to comply with 37 CFR 1.97(c) because it lacks either a statement as specified in 37 CFR 1.97(e) or it lacks the fee set forth in 37 CFR 1.17(p). It has been placed in the application file, but the information referred to therein has not been considered. It is noted that the IDS of paper number 11 was described by Applicant as a combined resubmission of the second and third supplemental information disclosure statements, however, it is noted that the IDS of paper number 11 is actually a combined resubmission of the first and third supplemental information disclosure statements resulting in the second supplemental information disclosure statement being filed without a statement or a fee. Section 609 of the MPEP states that multiple information disclosure statements may be filed in a single application, and they will be considered provided each is in compliance with the appropriate requirements of 37 CFR 1.97 and 37 CFR 1.98.

2. The information disclosure statement (IDS) submitted on 3/24/03 was filed after the mailing date of the first Office Action on 11/13/02. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement which is a combined resubmission of the first and third supplemental information disclosure statements is being considered by the examiner.

Claim Objections

3. Claims 4 and 15 are objected to because of the following informalities: the phrase "said at least one mounting end" in the last two lines of the claims should be changed to --said at least one integral mounting end-- to maintain claim language consistency. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 4 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "said at least one peripheral arc portion" in line 3 lacks proper antecedent basis in the claims. Claims 1 and 12 claim "at least one pair of upwardly curved peripheral arc portions".

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 2, 4, 5, 7, 8, 10, 12, 13, 15, 16, 18, 20, and 31-33 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4750718 to Nickel.

Re: claims 1 and 2. Nickel shows in figures 1 and 2 a variable rate multi-arc leaf spring assembly comprising: a main leaf spring 1 constructed of a composite material or particularly a fiber reinforced resin as disclosed in col. 2 lines 34-35, the main leaf spring defining an upwardly curved central arc portion shown at the bottom surface of the portion in the area of element number 3 shown in figure 1 having a first radius and at least one pair of upwardly curved peripheral arc portions shown on either side of portion 3 in figure 1 extending from the central arc portion and having radii not equal to the first radius as shown in figures 3, wherein the main leaf spring provides continuous variable spring deformation rate including a soft spring rate and a hard spring rate to the same extent as Applicant's.

Re: claims 4 and 5. Nickel shows the limitation of the main leaf spring further including at least one integral mounting end 5 connected with the at least one peripheral arc portion comprising a mounting eyelet.

Re: claim 7, 12, 13, 15, 16, 18, 20, and 31-33. Nickel shows in figure 1 a load plate 2 mounted beneath the main leaf spring wherein the load plate gradually engages the main leaf spring during a predetermined set of payload conditions to enhance the soft spring rate as shown in figure 2.

Re: claim 8. Nickel discloses in col. 2 lines 39-41 the limitation of the load plate being constructed of the composite material.

Re: claim 10. Nickel shows in figure 1 the leaf spring assembly further comprising an intermediary member 6 spaced between the leaf spring and the load plate.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1-4, 7, 9, 10, 12-15, 19, 20, 31, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 4345749 to Hellwig in view of US Patent 4750718 to Nickel.

Re: claims 1-3. Hellwig shows in figures 4 and 6 a variable rate multi-arc leaf spring assembly comprising: a main leaf spring shown in figure 6, the main leaf spring defining an upwardly curved central arc portion 31 having a first radius and at least one pair of upwardly curved peripheral arc portions 32 extending from the central arc portion and having radii not equal to the first radius as shown in figures 6, wherein the main leaf spring provides continuous variable spring deformation rate including a soft spring rate and a hard spring rate to the same extent as Applicant's, but does not include the limitation of the spring being constructed of a composite material.

Nickel teaches in lines 1-2 of the abstract the use of a main leaf spring

being constructed of a composite material, particularly a fiber-reinforced resin. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the material of the leaf spring of Hellwig to have included a composite such as a fiber reinforced resin, as taught by Nickel, in order to provide a leaf spring having improved corrosion resistance and lower weight.

Re: claim 4. Hellwig shows in figures 4 and 6 the main leaf spring further including at least one integral mounting end 40 connected with the at least one peripheral arc portion, the at least one mounting end adapted to be connected to a loading structure shown in the area of R1 in figure 4.

Re: claims 7, 9, 12-15, 19, 31, and 32. Hellwig shows the leaf spring assembly further comprising a load plate 34 mounted beneath the main leaf spring, wherein the load plate gradually engages the main leaf spring during a predetermined set of payload conditions to enhance the soft spring rate.

Re: claims 10 and 20. Hellwig shows in figure 4 an intermediary member 12 a bottom portion of which spaced between the leaf spring and the load plate.

10. Claims 3, 9, 14, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nickel. Nickel lacks the limitation of the main leaf spring and the load plate defining a uniform cross-sectional area throughout its length. In In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) the court held that the configuration of a claimed object was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration leads to an unexpected result. Examiner also

notes that Applicant suggests that there is no unexpected result associated with the leaf spring or load plate configuration through the admission in lines 1-3 of pg. 8 that one of ordinary skill would "recognize that that the cross sectional area of the main leaf spring...may also be defined by other shapes". It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the cross-sectional area of the main leaf spring and the load plate to have been uniform throughout the length in order to provide a means of reducing weight and material costs by using the smaller of the cross-sectional areas along the entire length of the main leaf spring and load plate structures.

11. Claims 6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nickel in view of US Patent 3904300 to Hetmann. Nickel is silent with regards to inserts in the mounting eyelets. Hetmann teaches in figure 1 the use of an eyelet 1 having a metallic insert 6. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the mounting eyelets of Nickel to have included metallic inserts, as taught by Hetmann, in order to provide an attachment means with rigidity and high structural integrity provided by a metal material.

Nickel, as modified, does not specifically disclose that the metallic insert is "out-of-mold". It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the metallic insert to have been an out of mold metallic insert since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability

for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

12. Claims 11 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable Nickel in view of US Patent 4801129 to Wells.

Wells teaches in figure 2 the use of an intermediary member 2 made of urethane as taught in col. 7 lines 39-41 spaced between a leaf spring 10 and a load plate 1. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the intermediary member between the leaf spring and the load plate of Nickel to have included an intermediary member made of urethane, as taught by Wells, in order to provide a tough buffer or spacer means between the spring and the load plate. It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Response to Arguments

13. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**.

See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

mmb 5/28/03
mmb
May 28, 2003

JACK LAVINDER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600